The Concept of Order: Philosophical Insights

Ana Bazac[*]

Abstract: The short analysis allows the emphasis of interdependence between epistemology and ontology, by focusing on types and structures of thought which shed light on the different meanings and importance of (the concept of) order. We, as observers, belong to the world we describe, and thus the paper is a combined effect and interplay of both the inner order we do or we do not have feelings about, and our images about the order of our outside. How we do understand the concept of order and how we do describe the order from within and from without are related to an entire system of concepts we assume. Thus, the message is the importance of the critical evaluation of perspectives and the optimism to having criteria.

Keywords: order, chaos, *telos*, epistemology, ontology, phenomenology, cause, logic, balance

IS IT SUBJECTIVE? FROM THE PHENOMENOLOGY OF THE CONCEPT OF ORDER

In our most intimate pattern of thinking, we consider that the order we need, we are asked to maintain if not to contribute to it, and we are told that it is good, is as it is said to us: because this order and this image about it is *given* to us. The order is outside us in the human messages and we can but integrate within it, and integrate it within our thought.

However, this ontological exteriority of the order is not a strange idea for us: because we ourselves as such are marked by the *physical order of our body*. For instance, without the periodic, recurring phenomena of eating and sleeping we cannot resist, and thus without the other phenomena of washing us, of breathing fresh air, of being surrounded by interesting things which stimulate our reactions, we consider life miserable; and we consider all those phenomena as constituting the normal order of life; even though we tend to not

[*] Ana Bazac (✉)
Division of Logic, Methodology and Philosophy of Science, Romanian Academy, Bucharest, Romania
e-mail: ana_bazac@hotmail.com

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thinking too much or at all to this orderly peculiarity of life. Anyway, without this order of our animal life we could not take this life.

Consequently, when it's about our idea of order[1] we are familiar with it and tend to consider different relations between things as ordered; and just this image of state of things is for us the proof of the *comme il faut*, of the necessity that, thus, is implacable, of the "normal" about which we do not put on test its aspects and meanings.

The ontological exteriority of order appears normal also because of our *cognitive patterns* transposed into our directly or indirectly and diffuse institutionalised science. Our cognitive patterns have developed as logical and developed the logic where the effect has always cause and where the fact in front of us is decrypted and verified by comparing it with more or less similar ones, by inducing general models containing the same causes and describing the succession of results, by confronting the facts with these models and noticing the differences, by enriching our acumen through the addition of n causal lines involving functions and reasons, by relating different facts and different models, by deducing rules and certainties from models and from this entire set of cognitive endeavour. And if this entire set becomes routine in our daily activity of searching for truth – in the ordinary life as well but – especially in our professional life, we once more understand that our habit of problem solving supposes inherently support points (or criteria) which are all and attest the external order.

Therefore, the concept of order is one of the most obviously *anthropogenic* ones: so, not in the sense that it's we those who

[1] Baron d'Holbach wrote: "The sight of the necessary, periodic and regulated movements which occur in the universe gave birth in the minds of men to the idea of order. This word, in its primitive meaning, only represents a way of envisioning and easily perceiving the whole and the different relationships of a whole, in which we find by its way of being and acting a certain convenience or conformity with ours. Man, by extending this idea, has transported into the universe the ways of looking at things that are particular to him; he supposed that there really existed in nature relations and proprieties such as those which he had designated under the name of order, and consequently he gave the name of disorder to all the relations which did not appear to him to conform to these first… It is therefore in our mind alone that there is the model of what we call order or disorder… However, if we want to apply the idea of order to nature, this order will only be a series of actions or movements that we judge to conspire to a common end… all particular beings in the rank they occupy are forced to contribute to this end; whence we are obliged to conclude that what we call the order of nature can never be anything but a way of looking at the necessity of things to which everything we know is subject" (d'Holbach 2004, 45, 46).

conceive of the ideas (and concepts) according to our mental processing of experience and information related to the external world, but in the sense that the structure of the concept, the model that connects the essential features of that which we intend to explain and express *are coming from* the human experience about *the human biological and cognitive experience*. In other words, if some concepts are worked over from the thinking about and experiencing the external world – let say, cell, photosynthesis, plants and their taxonomy and so on – the concept of order of the external world and within it *extrapolates* the human experience and necessity related to the maintenance of life and to the moments of thinking, reflecting a pure subjective origin of a representation of the external world. Obviously, it is not the only such type of concept; work (in physics), energy, field, force, etc. illustrate this transfer from the human experience to the outside inanimate world.

THE ORDER OUTSIDE US

However, we cannot see in a perfunctory way the first sense of the anthropogenic character of the concept of order. Yes, we are those who conceive (the idea of) order, and doing this we describe and legitimise it as – and according to the criteria of – *harmony*, *cadence*, *rhythm*, *symmetry*, *coherence*, *predictability* based on rules of formation, succession and change, *"determinism" of uncertainty*, *stability* as *stable patterns and relationships* between the elements of a system, this stability involving such relationships between the elements, between the elements and the system, between the system and its environment so that the causes of disruption of this situation to being weaker than the causes generating it. These criteria are at the same time images, thus descriptions, of the external world. However, these descriptions correspond to what is happening in the external world: they are *verified* and the verification involves the *practical* interaction with the external world – many and different types of its manipulation, namely, use in different types of correspondence of images/ideas/theories with the real situations – and they *change* and *are changed* according to this verification / commonly expressed, reality.

In nature and natural sciences

And here we grasp something very interesting: there are places where our description of situations as ordered – although it may use the

concept of order in a metaphorical sense, through the lens of an implicit adequacy to an image of quiet setting up of periodicity and symmetry – is or seems to be a simple acknowledgement of the objective factors and states, while in other places our description of situations as ordered is rather fuelling many doubts and suggests a strong subjective seal which we tend to question or is worth to be questioned.

For example, we can consider that coherence (in physics), though it is an ideal property according to which one sees and measures the degree of interference / the constant interference of waves, is and corresponds to a reduced and ordered agitation of particles. Or: that the low temperature of a system has the same effect. Or: that the dissipative systems which insert within them free energy from the environment, produce order/balance within them by at the same time transferring heat outward, are in a state of balance, i.e. order. Or: that there is ordered, regular crystallised structured ice and also amorphous structured ice (Rosu-Finsen et al. 2023), all depending on the conditions in which the water freezes. In all these cases, our use of the concept of order is simply reflecting the situations, since order is measured and measurable, verifiable, and the measurement and the mathematical formalism that demonstrates the picture have a high predictive power. And thus order is not an obsolete aim and element of the classical physics (and allegedly opposed to the "postmodern" relativistic model)[2], but it is *objective*: not in the sense that the concrete content/meanings of the concept of order used in physics and natural sciences would be independent of the cultural (including

[2] As one could superficially deduce from the shifts of meanings and importance of concepts and general views from the Newtonian physics to the 20th century one (closed discontinuous systems allowing determinism and laws, thus truth, certainty and order in reversibility *versus* open systems in processes emphasising probability, the role of the observer, randomness and tendencies in irreversible flows/order and laws of irreversible processes). Actually, there is not only a continuity of the two physics but also "inertia" of the classical meanings in the new physics, because these meanings are criteria and poles, or reference points. Although Olkowski's (2012) intention was to show a parallel between the shifts in science and those in philosophy and the reciprocal influence of the philosophical and scientific worldviews, she could suggest that the core role of the concept of identity (of atomic, discontinuous systems) – in classical physics – and the core role of the concept of change in the nonequilibrium thermodynamics would be the sign of an absolute opposition of the two scientific worldviews. Or, it is rather about their *complementary* position, because there are here two domains or *levels of reality* and, correspondently, two parts of physics which are not competing but help each other.

philosophical) worldviews, but in the simple sense that the experiences regarding the order are measured and measurable, verifiable and mathematically proved and hence reproducible, thus independent of any particular experience and worldview even though the measurement is not independent of the observer. It is true that in classical mechanics and thermodynamics which deal with closed and isolated systems the order is different from that of open systems and nonequilibrium thermodynamics, but in both there are established criteria according to which the feature of order and its role in the mechanisms and interconnections of systems can be asserted.

In the above situations, the concept of order is established starting from the concept of *cause* and the quest for causes[3]. Again, it's we those who choose the causes, but irrespective which causes do we choose[4], once working on them we always arrive to the necessary verification in the mirror of reality (through different forms of practice which attest or not our images, hypotheses and cognisance) and, inherently, to the change or adjustment of causes so as they better explain the facts. The causes can be understood as *correlations*, *interconnections* between local variables, and – at the extent these variables are lesser known/hidden and/or are non-local, as in quantum physics – their formulation as *certainties* gives room to formulation as *probabilities*. However, irrespective of the type of formulation, it's

[3] There are always many types of causes *for the same aspect in the same moment*. The quest for causes means always to acknowledge this plurality (see Bazac 2017a). The search for causes means to understand the origin and the following of many and different results. They must be related, because otherwise there is no grasping, action, development, change: nothing has reason. The search for causes means that there is past / anteriority, but also *open* future that is made by the complementary and intersectional evolving of subjects and objects.

[4] Not only in physics – where the 20th century revolution of relativity blew up the Newtonian view of permanent and graspable qualities of causes – but in the whole science it is rather about causality as a *methodological pattern* of linking the facts than about simple lines of determinism. These lines are moving, intertwining, composing and decomposing, we being those who choose and focus on their different aspects; but no matter how we do behave towards them, we assume causality and search for its understanding. Once more, the reversible (Newtonian) determinism is necessary for the understanding of relations between local forces and states, and the necessary cause-effect pattern is *complementary* with the holistic dialectical pattern of irreversible flow of things, of trends and perspectives. The local cause-effect pattern is integrated within the holistic dialectical one, but the latter does not "substitute" the former: they concern different things, different *objective* levels of realities – as non-quantum and quantum – and (different) *subjective* approaches.

always about the search for causes without which we cannot understand the "ordered" web of interconnections of the world.

The difference between the mezzo-world of material objects allowing connections making visible the local variables and thus emphasising the "classical" linear but also statistical determinism, and on the other hand the quantum, subatomic and particle world where the entities are never independent (thus never having separated and separately known properties) but always sets of inter-relations/correlations, does lead neither to the disappearance of determinism, interconnections meaning determinism, and nor of our concept of order, since the connections are regulative[5].

Anyway, we must also refrain from despising the mezzo-world "mechanical" cause-effect pattern, since it is open and fruitful. According to Hegel, the cause-effect relationship is not, in fact, asymmetrical in favour of the cause, because the surplus of the cause is absorbed in the process where the two transform themselves mutually, and the expected line of effect that becomes cause in an unending series is complicated by the reciprocal movement of the effect on its cause (Vetö 2000, 519-548)[6]. Is this *avant la lettre* description of the feedback, but also of the present process philosophy type definition – or in science, of the quantum – of entities as relationships unfolded inside them not a better suitability for order?

In society and social sciences

But there are other places where, consciously or not, we start from the *ends*[7] and we adjust our quest of causes and our labelling as order from these ends. Epistemologically put, in these places we reason according to *prejudices*.

We cannot decipher all the things, they are very complicated, and in order to advance, namely, to understand the causes, we formulate *principles*: which, at least for a while, or indefinitely, remain axioms. The principles are causes but obviously we cannot remain at them and, when searching for the causes, we either proceed as in the previous situations or as in those where we start from prejudices. And the

[5] The connections are regulative, constituting a "field of 'between'" (see Hashi 2013, 401-414).

[6] See Vetö 2000, p. 545: "the identity of the terms consists only in their mutual relation because the terms themselves are just this relation".

[7] The ends – as both final points and aims – influence the approach of things, namely for instance, also the type of (mathematical) reasoning (see Kidd 2020, 1-25).

principles as such can be not yet explained causes or even explained but showing the space of interference with other ones. Anyway, when it's about end function of principles rather about cause function, these principles structure a *Weltanschauung* that is more difficultly changed than a quest for causes. In *Weltanschauungen* these principles have formed *frame-theories*, while in the scientific quest for causes it is about *network-theories*.

A most ardent example of the theories begun from *ends* is the importance of order in the mainstream *social* theories. "Law and order" are the catchwords everywhere found in our societies and they form the premises of the concrete political strategies. This type of order lays behind the theories about the dominant liberal democracy. But these theories and the real liberal democratic regime were proved to have structural, fundamental shortcomings, actually negating their ideal model provided by propaganda.

The "normal" liberal representative democracy is based on the pattern of transfer of people's political will to the representatives resulted from elections. But this transfer involves a deep contradiction between the supposition of the *sovereignty* of the bulk of people – that is, power to initiate laws according to their own interests (and to respect these laws) – and the *free mandate* of their elected. This contradiction, rarely expressly considered as a contradiction, was much discussed by political philosophers: as inevitability of technical professionalism of politics, as efficiency of IT in the democratic technology of elections and public participation, as legitimacy of representative institutions, as rights of citizens and their limitation, as separation of powers, as corruption of representatives and deviation of democracy in the political institutions. What is odd is that the last decades' analyses consider the liberal representative democracy as the only form of democracy and the best solution for social order in a simpler way than the first liberals in the 18th century who tested this model in the real world of the bourgeois revolutions' age (see Quiviger, Denis, Salem 2008). For instance, if Benjamin Constant and Abbé Sièyes, being militants whose purpose was to solve the contradictions of their epoch and existing institutions, have insisted on the assertion of the power of public opinion, hence the necessity of freedom of press, Jürgen Habermas only lamented the decay of this institution and this freedom, noticing the consumer society and media, but not going further and remaining in the frame of this "best possible one" world and model.

The same pattern is filled with the most recent good critique of this liberal democratic regime (Chmielewski 2022, 31-46; Grygieńć 2022, 47-65). The obvious appearance and result of this regime is – as Habermas showed decades earlier – the high *passivity* of citizens that annuls every claim of liberal democracy as participatory ("by the people"). And even "the transformation of civic interactivity into interpassivity, which is a form of alienation and is responsible for the present transformation of democracy into its own façade, seems inscribed in the very nature of representative democracy" (Chmielewski 2022, 40). In other words, and even if the liberal democracy is only a pragmatic means to solve problems of governance and not an ideal political structure, it does not provide *social order* – as Abbé Sièyes legitimated it with the idea that through representatives the other citizens have the time to develop their own lives and businesses according to the division of work; since the citizens do not participate in the political life because, according to the liberal theories, they are not competent and inherently depend on experts, i.e. they are not autonomous from epistemic standpoint (Grygieńć 2022), it's also difficult to assume they would be capable of rational choices in their private life, for instance towards the offensive advertisement and supply of ways of life.

On the contrary, the overall result is *chaotic*.

Thus, the opposite of a model of ordered democratic life is a situation apparently without rules, hence without legitimate knowledge. This opposed situation was characterised as chaotic: reduced to a permanent spectacle of an incredible state of contradictions at both the level of principles and norms which ought to put order in the social systems.

In the interior of states there are the *contradictions* which are supposed to be solved by the liberal democracy: that, however, does not answer to the "stick and carrot" problem haunting the present liberal democratic societies, and neither to the unique official truth as the only one allowed to the humans which are supposed to be able to reason and discern. Does this unique truth bring order and peace in the liberal societies? It's unlikely, since – and irrespective of the huge heavy dominant pressure that considers every doubt of the unique truth as dangerous disinformation necessary to be suppressed – the order and peace are exclusively imposed by the elite which rejects (Nevradakis 2023) the structural origin of democracy in the legitimacy given by the mass, the bulk of people. Are the present democracies not

paradoxical since they sanctify elections considering them as the proof that things change – according to the will of electors – and at the same time promote the same strategic line that basically ignores these ones, giving the picture of a violent, irrational, insecure world for the many?

On world scale the international relations are similarly *chaotic*[8]. The immediate technical causes of the international chaos are the contradictions between principles, norms, and international laws. There is a hierarchy of norms, but the legal principles are both contradictory and contradictory to the norms; there are international institutions as the UNO and the ICC (International Criminal Court) but they have no power to impose the norms since they face both a blurred international status of the states and the principle of national interest which avoid and even cancel the mandatory assumption of norms and the cooperation for mutual benefits. Why this predominance of interests over norms? Because: (international) politics is a "power politics" (Köfler 2016, 78-94). What does this mean? Politics is *domination*, activity aiming at dominating and preserving the domination over the ruled. Domination is multi-form, of course, but the main one and the main purpose of domination is *class domination*, i.e., economic. The political interests are concrete interests of economic domination, grab of the labour power of masses from within and from without the state, grab of the means of production and existence; and for this, mutilation of institutions and consciences. Politics is domination because it arises from the structural principles of capitalism. This origin explains why the world is "baroque", i.e., a regulation of international policies, according to the common goods, is dangerous and, in fact, impossible (Laïdi 2005, 138-149), since the states defend only their own particular interest and the laws and settlements are considered only if they are favourable to the volition of the capital. For this reason, the present world is far from the ideal image of, for instance, the European Union that would promote and apply beautiful democratic norms without military force because the USA defends it (Laïdi 2005, 49-60). And for this reason, the concept of rules-based-order is improper, counterfeit (Petersen 2022).

[8] The related literature is marked by *either* imposing an international arrangement that appears as a video war game made for poorly educated teenagers who never question "why" but assume that life would be a simple victory of the powerful over the weak (like Brzezinski's *The Grand Chessboard: American Primacy and Its Geostrategic Imperatives*, 1997) *or* by characterising this "arrangement" as chaotic. See, for example, Ramonet 1997; Joxe 2002; *Escobar* 2014.

Both from the standpoint of relationships of the state with its citizens and of the relationships of citizens within the state, as well as from the standpoint of international relations between states, more precisely nowadays between polarised networks of dominant forces and opposed ones, it is difficult to speak about *the rule of law* when the fundamental concepts of democracy, sovereignty and sovereign equality, and autonomy, are either ambiguous or not elucidated at all but supposed to be assumed by the parts who receive the message and meanings of the transmitter[9].

Therefore, the causes must be searched for, and *sine qua non* all the way to the end, in order to change the symptoms. The modern European tradition developed the methodological individualism. It holds that the social fabric can be explained only as a Hobbesian multitude of individuals aiming each of them their private ends, and thus only by extrapolating the behaviour of the modern individual, i.e., living in (the Western type of) capitalism and rather as a non-toiler, as behaviour of societies.

In the emblematic construction of John Rawls – the "rational plans" of individuals being the basis of a rational society organised according to the principle of justice specific to the liberal democracy – these rational plans concern only the individuals but, with all the presumptions of the equal original position, they may well enter in collision not only with other individual plans but with *society as a whole*. If

- the primary social goods are "rights, liberties, and opportunities, and income and wealth" (Rawls 1999, 79),
- "the good is the satisfaction of rational desire" (Ibid., 80), and
- "we have assumed that the parties in the original position have correct beliefs. They acknowledge a conception of justice in the light of general truths about persons and their place in society. Thus it seems natural to suppose that in framing their plans of life they are similarly lucid" (Ibid., 481),

then the contradictions between "truths about persons and their place in society" and the facts in society, and obviously the contradictions between plans to achieve opportunities, income and wealth, can be

[9] "Strictly speaking, the *rule of law* remains an abstract ideal if" (the enforcement of norms and especially the consistency of the system of norms) cannot be ensured; when there are logical contradictions or incompatibilities between the contents of norms, and when the hierarchy of norms reflects the particular interests of the actors framed by power relations (see Laïdi 2005, 79).

inherent. And: the result of these rational individual plans is not order – and neither law, since it is infringed by those who can do it in the name of "opportunities, etc." – in society. The starting methodological individualism proves to be limp. The principles of individual rational choice for rational life plans (the most effective means to achieve the goals, the inclusion of all or the desired purposes, the greater likelihood of success) may well generate irrational results, for individuals and for society as a whole.

Rawls considered his model an ideal Kantian one (see especially the third quote above), where formalism would give the universal claim and value. But there is a huge difference between the Kantian ethics and the theory of Rawls. In his design of formal ethics, Kant posited – as core and gist – the categorical imperative (Bazac 2016). But this one is, no matter the formulae, a question of *content*, of substance of the form. And only this content guarantees the *non-contradictory* feature of the formal ethical model. Only this content guarantees the *non-contradictory* feature of the ends and values of individuals in the decent, democratic, say liberal society desired by both Kant and Rawls. But only this content gave/gives the *criterion* to evaluate the values and ends of the life plans. While in Rawls, there is only about a mere form, based on assumptions of original position and correct beliefs – "If there is original position, correct beliefs etc., then the liberal democracy is the best of all possible worlds" –, the ethics of Kant was and gave a *deontological* model, *opening up* the way of building a democratic, human society. Rawls' theory is an ideal image of the liberal *Realpolitik*, without any fuelling force over it and within.

The chapter about Envy and Equality is relevant. Envy would be the major structural (because it is a perennial psychological state) cause of troubles in the liberal society, the behaviour of institutions being rather a question of conjuncture. And equality is, indeed, one of the conditions of justice, but only the political equality: nowise the economic one[10]. "There may be forms of equality that do spring from envy. Strict egalitarianism, the doctrine which insists upon an equal distribution of all primary goods, conceivably derives from this propensity." (Rawls 1999, 472) This entire theory does not answer to obvious contradictions where full of "envy" are the possessors of capital, in a savage competition for resources and markets, and to

[10] "Yet to insist upon equality as the two principles of justice define it is not to give voice to envy" (Rawls 1999, 471).

worldwide turbulences far from social order and perspectives of social order. The liberal – i.e., capitalist – condition and feature of democracy have annulled both the claim of democracy and of universalism.

ONCE MORE ABOUT THE INNER ORDER

A) It's not superfluous to remind a special situation: that of *logic*. Our logical thinking has developed along the human evolution, i.e., in the process of relationships with and answers to the natural and social environment, therefore in the constitution of *access consciousness* to the world but also of the *phenomenal consciousness* of the feelings experienced by the humans, as a kind of *meta* look *on* this process.

In both manifestations of the consciousness, logic has developed as a *verification* of the accuracy of access and responses, of feelings, and of the internal coherence of the judgements and criteria according to which the relationships with the world and the judgements occurred in the frame of these relationships took place, and even as a verification of the *meta* look which the consciousness developed over time.

As verification, logic was firstly a *post* fact but then it became inscribed into the deployment of consciousness as a *pre* fact, that is *preventive*, and also as a *permanent* accompaniment of the moments of grasping and knowing the world and deciding one's decisions concerning it.

Thus, logic is instrumental in the access of the human animal to the world, but it has also a specific human function developing just the *moral* feature of humans. We could say that the moral itself could not have formed if the logical instrument would not have revealed the logical results of facts and decisions, the logical contradictions and the logical solutions. Actually, through logic the human consciousness has itself constituted: as a *transparency* /self-reflection without which there is no possibility of correction, persistence and renewal. Through logic, "the consciousness is the most transparent; it cannot hide to itself its own exploits; not the others are the most intransigent judges of its behaviour, but itself" (Bazac 2017 b, 104).

Logic is order or it is related to order. By having in its core the ideas of truth and false, the thinking simplified the murky and muddy blurred appearance of things: *simplification* means order. The humans were hit by paradoxes and they could but decompose them and put order within their real or joking complexity by applying the two-value pattern to the *different levels of reality* the paradoxes contain.

And indeed, logic is order in a very sophisticated and unexpected manner. It usually works – or the human consciousness works – with

many-valued propositional evaluation; because the existence itself and its image and knowledge have multi-facets in a kaleidoscopic spin. But in order to have appropriate reactions, fruitful responses and solutions, the humans decompose the facets and reduce their understanding to only one value of truth in a given time interval for one evaluation.

The humans know very well that things are complicated; this is a first image of order, because order is just the acceptance of the colourful throbbing existence. This *first* image of order is the real *human* one, and subliminally the humans always considered the many possibilities, the many alternatives and hypotheses; and just this image of order of the *multa* contributed to the multiplication of glances over the world and of the *meta* looks.

However, because of the survival constraints over them as living *animals*, the humans create(d) the *second* image of order, that of one single possibility in a system cut out from the whole of intermingled systems in a time interval, while the opposite of this precise possibility, the impossibility, is the false which is put face to face to the truth as the two poles of a *sine qua non* functional certainty. We could surmise that the "two-value logic" is the element of *continuity* between the animals' generalisation of perceptual access to the world (Zentall et al. 2008, 13-45[11]) and the human animals, while the *discontinuity* of the latter is given just by the logic of nuances and standpoints. The two-value logic can be considered an inborn mental ability of humans inherited from their animal ancestors, while the multi-valued logic is a both inborn and acquired capacity of humans from their own human experience.

And finally, logic is order because it is *formal*, i.e., it concerns the formal patterns of thought without which the infinite arrangements of concrete phenomena could not be understood at all. They are *meta* patterns and involve also the well-known logical principles of identity, non-contradiction and excluded middle. And even though we gloss today about included middles, shared identities and paradoxes, we see very well that all of these can be explained only by putting order in them[12]. The humans have started and expanded the ability to debate

[11] The classes of conceptual stimulus are formed in nonhuman animals with and by developing a two-value logical pattern.

[12] "All of them can be solved by a certain correction of relevant concepts" (Djijian 2016b, 50). Actually, Aristotle observed that only the assertions have truth value – not the questions and neither the imperatives – and thus both the questions and imperatives can be non-contradictory if they are formulated according to their

paradoxes; they knew that these ones are *contradictions* which one must to decipher, and they developed even a science to dispute and solve them, the dialectics, ultimately considering the contradictions as both pair entities which are the roots of existence and couple cognisance which are the most stimulating for the human knowledge.

And because the contradictions are concrete, logic is order because it involves both form and content, since the truth is when we come to understand as comprehensively as possible the concrete object (in its particular characteristics). And this means that, first, we must name the *formal* mean by which we understand the concrete object; but also, the *content* that is the set of meanings of a concept / idea. The content is the one who refers to the *telos*, that is, to the complex purpose of the idea and its communication: therefore, also to the purpose of the form. The reason to be /the *telos*/ the meaningfulness of concepts is their content (Bazac 2020).

B) Inner is also the order – thus balance or homeostasis – in each subsystem of the human body and in its whole. Our feelings rather about the disorder occurring in different subsystems are powerful signals for us that their balance needs to be restored. However, our feelings are not very accurate or not every time. It is so because the subsystems and their constitution of other subsystems are infinite, but also because we have no feelings related to all the subsystems. It's possible we feel good, so our whole body seems to be OK, but that in a part of this marvellous mixture something being disturbed. It's also possible that we feel pain in a part of our body and from this our entire body becoming painful, our entire wellbeing becoming annulled. What is important here is that we must understand the relationships between the different types of order and disorder of our organism: we must not ignore the partial imbalances in the name of a general wellbeing, because the whole has no absolute power on the parts; and we must not ignore the general anxiety despite the normal results in the periodical medical analyses. In order to avoid both hypochondria and indifference.

ORDER/*KOSMOS* AND CHAOS

The humans need a firm basis for they transform their beliefs into truths. This is the reason of their as thorough as possible verification of facts in different types of experience they deploy. When thinking to the

adequacy and the adequacy of concepts they include to reality/to demonstrated concepts as corresponding to reality.

immensity of the world outside them, far beyond the near milieu, they extrapolated the order considered in this milieu – so the order imagined in their minds for this milieu – to the order of the immensity. The ancient Greeks considered the *kosmos* as *ordered immensity* / *immense order* according to the laws of which even the human mind and speech are configured. The logic of words was the little human mirror of the universal *logos* indicating the immense order of the world *transposed into the humans as rationality*; because *logic* is order transposing at the human level the Order without which there is no reason of the existence as such.

How could the gods have created an absurd world, meaning without order? How could *Ananke* impose the necessity, the implacable fate, since there would not have been order, but chaos? Is chaos not the huge whirlwind of winds that bubbled without stopping and without meanings? Is, ultimately, chaos not terrible just because there are no meanings within it since there is no order according to any criterion?

The human need of order gave the *myth* of generation of order from chaos: the order was the second, the result, and once this succession established, it was clear that it cannot re-deploy backward naturally /from the internal essence of chaos and order. (And this is quite opposite to the present process arising from the capitalist system crisis and the capitalist protagonists of power, of creating chaos and imposing "order" from this chaos).

And then the European descendants of Greek philosophy reduced the term *kosmos* only to its spatial meaning, as immensity of the World, comprising stars, the moon and the sun, the Earth and all the gods governing all the strata of the world (so, even the underworld). But for the Greeks, this immensity had always meant order: actually, just because every part of the World had meanings, and first, that of orderly Being related to other parts and to the *whole*. One could not say anything about Chaos, but one could say a lot about the Order of the world. The order was the entire world, where things were related to each other as in a harmony, and thus the order involved the patterns of "logical" regular relations, patterns as "laws".

The Greek mindset was marked by *cosmocentrism*, including as integrating man with his entire special world of *logos* and its results; *anthropocentrism* was integrated in cosmocentrism in an odd way, witnessing the inherent contradictory ideas of external determinism over things and man – determinism and rule of *Kosmos* by gods – and of emphasis of this determinism only by man, by his little *logos*.

CONCEIVING ORDER

Epistemologically speaking, we can observe the saga of the patterns of thinking: *firstly*, the humans need order in both their physical and intellectual life, and they experience this order as something specific human. Thus, *secondly*, they conceived the *concept* of order in and following this intimate experience, and, once more, the concept referred to this experience. Then, *thirdly*, from this human-related and human meaning concept, they *translated* the order to the external world; as if, *fourthly*, the *concept* of order would be a simple *copy* of the exteriority, copy to which the humans arrived and copy which was the proof of their understanding of the Order of the external world. *Fifthly*, the humans gave legitimacy function to the external Order for their own ability to conceive the order, and for the order they put within the human life: the human *logos* was (i.e., was conceived of as) only a copy, and a narrow one, of the *Logos* of the world, that is, of the Order of the world.

This pentadic scheme – movement in five steps – can be simplified as follows: 1) Humans deduce order from their life / the good moments and turns for them are considered the proof of the order (they think the order as the pleasant pattern of their life); 2) They transpose the concept into the external world, and 3) They deduce their human order from the Order of the world.

Therefore, the order is human – *subjective* as related to humans, not as infinitely varied according to the number and positions of humans but as related to the experience of humans *qua* humans; and then it is conceived of as "objective", non-human but the feature of impersonal Being; and then this objectivist conception becomes the "reason", the basis of the human order, the model of the human order.

Moreover, the order is in most of cases a *tacit* idea. It is *implicit* / *tacitly implicated* in other ideas/theories, and an important task is just to dis-cover, to un-veil this hidden assumption in many discourses, and to transpose "the implicit forms of thought into explicit ones" (Djijian 2016a). This transposition means in logic the uncovering of the ultimate task of the concrete idea that hides the assumption of order, by the analysis of the solution given in the idea.

The implicit concept of order, as the other implicit concepts, *is not explained* – that is, it is not explicit – in the concrete idea/theory about other problem but that comprises the implicit concept of order; because *it is considered known* (even though nothing in the whole discourse

allows this supposition) and, attention, *it is considered as accepted* or, more exactly, its suggested meaning in the discourse is considered as unanimously accepted.

For this reason, in order to transform the implicit forms of thought into explicit ones we must 1) *explicate* the *factors* and *forms* implicitly contained into the hidden concept – in our case, the order – and transform them into causes, deciphered in a common scientific manner. Their investigation leads to differentiate between general and permanent factors/causes and random ones, between evident and apparent ones. The logical explicit analysis allows 2) the explicit formulation of logical *solutions* [13], by confronting and logically emphasising the consequences of different alternative solutions. Consequently, the transformation of implicit forms of thought into explicit ones involves the courage to divert from the official/accredited/"general" solutions. And this allows also *anticipative* thinking: to possible occurrences, to logical answers to these ones. To put in clear-cut manner the tacit assumptions opens the capacity to go further on the paths this capacity manifests.

DEFINITION (?)

The order is exactly what we imagine it to be: an arrangement of things according to our conception about the efficient and functional relations between them, thus of fulfilment of resilience criteria as symmetry and doubling and even tripling in the appearance of balance of things. In this way, the order is clean, neat, simple, "gracious", pleasant, beautiful. It means succession, rules – including of mathematical relations, but not only, or only including them as the means through which the processes are explained by the description of the states – for successive, non-successive, repetitive according to different criteria[14], commutative[15], transitive and distributive, recursive movements; rules

[13] I followed Robert Djijian's pointing out, summarising Georg Brutian's transformational logic.

[14] Repetition in successive leaps, repetition by jumping, in an ordered jump (the property of being odd numbers of 3, 5, 7, etc.) or in a disordered jump, or a jump whose order is not yet known.

[15] These concepts should not be fixed only in their rigorous mathematical meaning. In arithmetic, 2 x 3 = 6 and 3 x 2 = 6, if we commute x with y in addition and multiplication, the result is the same, hence *by mentioning the rule* of commutation, the (image of) order and predictability is/are assured. But it's the same even beyond the formal. If we change "near" with "far away", there are two possibilities. *Either* we change the perspective – and we announce clearly our intention and our goal, thus

of mirroring, rules of creation and decay, rules of combinations and rejection.

Rules, and laws; however, first of all from an epistemological standpoint, the first moment of our clash with the world is of absolute cognitive exteriority, i.e., misunderstanding: the world appears to be/is a big *puzzle*. The rules and order we put within / we consider as the lens through which we approach them emanate from us. And then, when the fourth moment in the above-mentioned pentadic scheme or the third in the triadic one occurs[16], we think as the scientists from the 17th century, that we face a world full of order. For the scientists who began to immerse in the world which they did not know – and thus it appeared as a *chaos* challenging them – the presupposition of ordered universe was necessary in order to disclose this order, its laws. They *expected* to see laws. Ontologically, the first moment was the *order* of the world, from which they should start and work for deciphering it.

But in this way, a certain contradiction between the epistemological and the ontological standpoints could happen. And what was and is important is to never forget that the subjective source of the concept of order, as well as the "miracle" of conceiving of laws and rules which work, are testified in and by the objective world. This is the "miracle" of knowledge, of science: the success of theories, obviously created by humans, is based on the supposition of order, but rationally this supposition does not stand up (Einstein 1987).

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the rule about the changing of conditions and perspectives (for instance, that the concepts – far away, near – are used metaphorically by the same person concerning the same description: "you are near me, but far away") – and thus (the image of) order is not hit; or we do not announce and we nevertheless change them *ad libitum*, and thus without any rule we can speak not even about an apparent disorder; because disorder is real. In our example from arithmetic, before announcing the rule of commutation, the changing of variables may perplex us, as disorder. By announcing the rule, the disorder becomes only apparent, as a joke; actually, there is not about disorder, but order. Inversely, the introduction of "freedom" to not follow any rule may well be a rule, but the result is absolutely *unforeseen*, thus absolutely disordered; not a joke, but an unpleasant state. If one takes the freedom to say anything without any specification of criteria, the result is anomalous. For this reason, we normally cannot equate the near and the far away, the short-term and the long-term, etc. Therefore, order is assured by both the existence of *rules* and their clear *announcing*, and the awareness of *meanings* of words, beyond the mathematical formalism. And these meanings are both for us – for the order we feel and conceive of about the world – and for the world as such.

[16] The fourth/third moment: that our image of order is objectified *as if* fit would be the order of the world.

The concept of order is *context dependent* but at the same time trans-historical, just because it involves rules and laws. In any case, the concept of order takes into account the constitutive and random constraints given by the real "active matter" where collisions and correlations give birth to new entities which, especially when it is about large populations of entities, live in a space marked by *irreversibility* (because of quantum instability) and *probability*. Thus, two complementary processes take place:

- one that concerns small classical *closed* systems where there is rather *order* in the arrangement of particles and objects because the most probable state of these systems "is the one in which the multitude of events taking place simultaneously in the system compensates for one another statistically" (Prigogine and Stengers 1984, 124). In these closed systems, *reversibility* applies, once more lighting the order; and
- one that concerns large systems with large populations (quantum states of atoms, subatomic particles and molecules), and *open* systems, where there is rather disorder than order because the laws of correlations and agitation give rise to a probability far from equilibrium. Here, there is about *irreversibility*, realising through bifurcations within disorder new states of equilibrium, thus of order in dissipative systems receiving and giving energy, as the living systems.

Since there are always about large populations, "nonequilibrium is the source of order. Nonequilibrium brings 'order out of chaos'" (Ibid., 287). Time and irreversibility tend to break symmetry, thus to transform order into probability near equilibrium, into disorder. But there is also probability in equilibrium (this is the highest probability), generating a new order; that is never absolute and forever. The systems integrated in larger systems fluctuate, and from these new creations of order, as well as disorder, take place; even small fluctuations can change the existing state. In this way, we see the coexistence of ordered and disordered systems and states, their communication and relationships. Order and disorder are never exclusive to one another[17].

[17] "In many cases it is difficult to disentangle the meaning of words such as 'order' and 'chaos'. Is a tropical forest an ordered or a chaotic system? The history of any particular animal species will appear very contingent, dependent on other species and on environmental accidents. Nevertheless, the feeling persists that, as such, the overall pattern of a tropical forest; as represented, for instance, by the diversity of species, corresponds to the very archetype of order. Whatever the precise meaning we will eventually give to this terminology, it is clear that in some cases the *succession of bifurcations* forms an irreversible evolution where the determinism of

Does, from this surrealistic picture that involves thermodynamics and the dynamics of classical systems, relativism devoid of any pillar result? Not quite. Nowadays, the order, as well as the disorder, cannot be conceived as fixed and absolute; they are time and space, quantity and quality dependent. They may be ephemeral but nonetheless they are not evanescent from our mental patterns. We need them and use them as poles in our description of the world. In this respect, the relativity of things does not annul the stable given by the concepts. On the contrary, just this stable helps us to better evaluate the amplitude and depth of both order and disorder.

The concept of order is an impressionistic synthetic one: things appear inter-related in balanced – thus stable – systems, giving a beautifully simple image about them. However, we now know that "stability and simplicity are exceptions" (Ibid., 216) and/ permanently coexist with contrarieties and contradictions, which coexistence in n levels of reality and approaches of these levels give us not a chaotic world but a very *complex* one: that has its "order" in the various theories of systems and principles of their constitutive relationships.

But, when we focus on the origin of order, we should think about the difference between *the inorganic* world – where our criteria of order are applied on a world that appears unknown and chaotic – and both the *organic* and the *social* world where, even though we are those who conceive the criteria of order, in fact we find *ab initio* a given order.

THE CLUE: THE MORAL WITHIN THE ORDER

The concept of order has an inherent but hidden *moral* meaning: it is *good*, namely, it is good – that is, necessary – for the discussed things, until to assure their system existence. If there is not this order, one spokes about *dis-order*, destruction of the coherence of elements in the system and of the system in the concert of systems from its environment. Once more, the order – proven by the external world via the scientific theories – is at the same time *true*, that is to say verified, *good* and *beautiful*[18], as if it would correspond to the ancient Greek

characteristic frequencies produces an increasing randomness stemming from the multiplicity of those frequencies" (Prigogine and Stengers 1984, 169).

[18] This triptych or rather unity appeared in Plato, *Phaedrus*, 246e: "The divine is beauty, wisdom, goodness, and the like; and by these the wing of the soul is nourished, and grows apace"; and, in modernity, in Victor Cousin's *Du Vrai, du Beau et du Bien* (1854).

ideal of *kalokagathia* assured by reason (*phronêsis*), explained Aristotle. The fact that this ideal brought the seal of the historical context where it was possible to and conceived of only for the free men who could exercise in gymnasium (Weiler 2002, 11-28) and appreciate the good (Aristotle 1981, 1249a) – opposite to others – and where it manifested in different forms (Prokop'eva, Tishkina 2021, 178-184) is not important here; but only that nobility as magnanimity was the ethical model of understanding the subtleties of *causes and consequences* and of *choosing* the good, and thus represented "the perfect goodness" (Ibid.), namely the unity of virtues (Bonasio 2020); and that it was offered to *all* the citizens of the *polis*, suggesting that its assumption would transform craftsmen and shopkeepers, and owners of agricultural farms into an elite (García 2016, 16-22).

If so, we cannot see the concept of order without making visible the concept of *telos*, of the *what for* the order of systems and *what for* our image of order. This involves the awareness of the *consequences* of the order we cherish and thus the possibility and necessity of anticipative reasoning, from the consequences to the present image of order. This involves also the understanding of composition of local/partial images and decisions, however rational may they be, into larger images containing the partial ones but proved to be so irrational that the consequences of the order of this composed system of facts and actions could have an irreversibility that is adversative to the truthful and good order and its inherent supposition.

Accordingly, the concept of order appeals to more than the image of the consequences of our pattern of order, to the *means* necessary to attain the good ones and to avoid the evil ones. And here we must understand that the technical means used to solve partial tasks in partial systems must be taken into account not only from the standpoint of their technical efficiency but also from that of the order in different types of macro-systems comprising the partial ones.

The *telos* itself is an extrapolation of the subjective aiming at a specific end to not only the animate beings but also to the inanimate world. In this regard, Aristotle considered that every being and substance – as unity of matter and form – is governed by the principle of *entelechy*, their existence as such being related *ab initio* to a *telos*/ reason-to-be that configured each of them.

However, we must pass beyond this "Newtonian" objectivistic image, because it does not involve the odd specific feature of man, namely *responsibility*. Since the *telos* is given, we can participate to its

fulfilment, irrespective of its meanings. But, as our conception of order is a creation of our mind, our experience, our personality, so the *telos* is. We are those who give the meanings of things. Therefore, we are responsible for the meanings of the world[19].

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[19] Just because we create the world by the medium of our ideas, precisely because the ideas become independent from us after we conceive them, we are responsible for the short- and long-term consequences of our ideas and actions. Thus, responsibility means to question the *telos* of our ideas and actions. Not only their causes, but always their *telos*: and always for the humankind.

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